

THEN, AND NOW

Why Roosevelt's Explosive 1933-45 Recovery Worked

Part 2, by Richard Freeman

The following is Part 2 of 3 of an article that appeared in a LaRouche in 2004 special report, Economics: The End of A Delusion. Part 1 (see EIR, April 26, 2002) traced the roots of President Franklin Roosevelt's economic outlook, and showed that his approach was grounded in the American System of political economy, as defined by Alexander Hamilton and by the Constitutional principle of the General Welfare.

B. The New Deal Recovery of 1933-37

Roosevelt's task as President was to restore the principles of the American Revolution for an economic recovery, with its center, the General Welfare clause. He succeeded brilliantly, pulling America and the world out of a descent into Hell.

Roosevelt would have to take on all the major elements: the banking collapse, the physical economic depression, the destruction of the living standards of the people. On the one hand, a very big job, and on the other hand, one for which he was well-prepared.

On March 4, 1933, Roosevelt outlined his conception in his first inaugural address. "So, first of all, let me assert my firm belief that the only thing we have to fear is fear itself—nameless, unreasoning, unjustified terror which paralyzes needed efforts to convert retreat into advance. . . .

"The money-changers have fled from their high seats in the temple of our civilization. We may now restore that temple

to the ancient truths. The measure of the restorations lies in the extent to which we apply social values more noble than mere monetary profit."

The President spoke of Happiness: not the Lockean notion of hedonistic pleasure-seeking that prevailed under Mellon and Coolidge, but the Leibnizian conception that is communicated in the U.S. Declaration of Independence. "Happiness lies not in the mere possession of money; it lies in the joy of achievement, in the thrill of creative effort. . . . Our greatest primary task is to put people to work. This is no unsolvable problem if we face it wisely and courageously. It can be accomplished in part by direct recruiting by the government itself, treating the task as we would treat the emergency of a war."

Roosevelt called for the "supervision of all forms of transportation and of communications and other utilities [such as electricity], which have a definitely public character" and "strict supervision of all banking and credits and investments."

The President concluded: "I am prepared, under my constitutional duty to recommend the measures that a stricken nation in the midst of a stricken world may require. These measures, or such other measures as the Congress may build out of its experience and wisdom, I shall seek, within my constitutional authority, to bring to speedy adoption.

"But in the event that the Congress shall fail to take one of these two courses, and in the event that the national emergency is still critical, I shall not evade the clear course of duty that will then confront me. I shall ask the Congress for the one remaining instrument to meet the crisis—broad executive power to wage a war against the emergency, as great as the



Just as Franklin Roosevelt was about to be inaugurated, international financiers' pressure forced German Chancellor Kurt von Schleicher to resign—the first step in Hitler's coup—and an assassination attempt was made, in Miami, against Roosevelt himself. Had von Schleicher survived and implemented the "Lautenbach Plan," similar to the New Deal, World War II would not have occurred.

power that would be given to me if we were in fact invaded by a foreign foe.”

Roosevelt was proclaiming that he intended to succeed. He would avail himself to the fullest, of the great powers the U.S. Constitution deliberately created in the Office of President, to be used exactly in a period of crisis. He would act within the framework of the U.S. Constitution, without ever violating it.

Roosevelt also, many times, addressed the downtrodden citizen, believing that government's purpose is to allow that citizen to be a productive human being. In his speech accepting his second Democratic Presidential nomination in June 1936, he evoked “Charity—in the true spirit of that grand old word. For charity, literally translated from the original, means love, the love that understands, that does not merely share the wealth of the giver, but in true sympathy and wisdom helps men to help themselves.

“We seek not merely to make government a mechanical implement, but to give it the vibrant personal character that is the very embodiment of human charity.

“We are poor indeed if this nation cannot afford to lift from every recess of American life the dread fear of the unemployed that they are not needed in the world. We cannot afford to accumulate a deficit in the books of human fortitude.

“Governments can err, Presidents do make mistakes, but the immortal Dante tells us, that Divine justice weighs the sins of the cold-blooded and the sins of the warm-hearted in different scales.

“Better the occasional faults of a government that lives in the spirit of charity, than the consistent omissions of a

government frozen in the ice of its own indifference. . . . To some generations, much is given. Of other generations, much is expected. This generation of Americans has a rendezvous with destiny.”

The Recovery Measures

FDR saw the crisis worsening before his eyes, from mass unemployment to banking failures; and that he needed to attack them at their core. This required:

- Building technology-transmitting infrastructure, both hard and soft, including great infrastructure projects, such as the Tennessee Valley Authority, that produced a spectacular increase in the rate of productivity, as well as the productive powers of labor, for the United States as a whole. The TVA built an integrated development project which developed abundant hydroelectric power, flood control and river diversion, scientific agriculture and new industry; it spread literacy and education, and eradicated malaria. TVA's infrastructure projects employed large numbers of people.

- Public works. The government ran public works employment programs, that hired millions of unemployed, principally building infrastructure. In so doing, the “multiplier effect” of the public works programs reactivated the idled industrial and related workplaces of the private sector: The large volume of goods needed by the infrastructure projects required increased output from the factories, and the rehiring of workers. In addition, the new infrastructure greatly increased the technological level of the whole economy.

- Banking and credit. Roosevelt had to stop the crash of the U.S. banking system, and, by related measures, halt the

process of farm and home foreclosures. Economic activity required that the banking system work. Simultaneously, Roosevelt had to ensure the flow of credit into the economy's productive activities. Roosevelt did not have a National Bank; instead, he reshaped the Reconstruction Finance Corporation into a Hamiltonian instrument, which issued and directed cheap and abundant credit into the physical economy and infrastructure, producing growth in turn.

- Protectionist regulation. Roosevelt issued a slew of measures of protection and regulation, which increased America's sovereign control over its credit and economic affairs. To the extent that these measures deliberately weakened Wall Street and the City of London, Roosevelt could shift the economy from speculation to production.

- Social justice. Roosevelt introduced measures, which uplifted the downtrodden, gave economic security to the elderly, etc.

These New Deal measures must be viewed, as they were in actuality, as a single, integrated package, subsumed by a higher ordering principle, whose elements reinforced each other. For public works and infrastructure-building to succeed, there had to exist a stable, functioning banking system, and directed credit. For the banking system to function, its loans had to be sound, and infrastructure-building, by guaranteeing a growing economy and stable businesses, provided the key to sound loans.

As Roosevelt stated clearly at the conclusion of his first inaugural address, he intended to implement his New Deal program on a crash basis, focussing the resources of the economy, and the minds of the population, on a mission. This did not mean that he achieved success within weeks—some of these missions took years to come to full fruition—but that the broad, sweeping features of the mission were launched and pushed forward as a package.

Roosevelt called the U.S. Congress into emergency session on March 9, to tackle the banking crisis, and got the key measure through Congress and signed into law within 24 hours. To maintain that momentum, he decided not to disband the Congress, but to keep it in session, and working. Within the span of his celebrated 100 days—between March 4 and June 16—he realized 15 pieces of legislation or executive orders. Much of this was major legislation. It included acts for public works and infrastructure, emergency banking reorganization, regulation of banks and stocks, etc. Some historians, idiotically, have criticized Roosevelt for not getting every measure through in the first year, and introducing some in 1934, 1935, 1936, etc. But of course, no President can always control the pace of Congress. Roosevelt just kept leading them forward.

Ending 35 Years of the British System in the U.S.

The President was tearing up, root and branch, the British System policy that the financiers had imposed on the U.S.

following the 1901 assassination of William McKinley. He kept the population abreast of this combat, and morally motivated, through his “fireside chats.” Already during his first week in office, Roosevelt had received an unprecedented half-million pieces of mail. The people were engaged and combative from the start.

Let us look at the revolutionary achievements of the major elements of the New Deal: 1) banking and credit; 2) infrastructure-building; 3) public works employment; 4) protectionist regulation; and 5) social justice. Roosevelt was orchestrating all these efforts at once for the maximum effect on the national emergency. However, the New Deal did not solve all the severe problems of that emergency. It required the mobilization of 1939-44 for World War II, to inject into the economy the “science driver” principle—inclusive of the “machine-tool principle”—which is central to the American System of political economy. The science-driven 1939-44 mobilization built much new manufacturing capacity, of the highest technological quality. The interaction of the science-driver principle with the preceding accomplishments of the New Deal, produced explosive anti-entropic growth.

1. Banking and Credit

President Roosevelt's move to reverse, what had seemed an unstoppable banking collapse, required that he break the City of London-Wall Street dictatorship over the American credit system, under which those banks had directed credit, almost exclusively, into speculation. Roosevelt promulgated a series of protectionist measures, which increased America's sovereign control over its credit and economic affairs. They deliberately took Wall Street's and the City of London's “hands” off the American economy, so that it could shift from speculation to production.

Roosevelt's first actions accomplished a substantial, though partial, banking reorganization. But by acting swiftly and decisively, he instilled confidence. After three years of an unrelenting diet of bank failures, within 31 days, Roosevelt had 75% of the banks open and operating. On his second day in office, March 5, 1933, his executive order used a provision of the Trading With the Enemy Act of 1917, to declare a National Bank Holiday, which superseded the separate individual state bank holidays, and closed indefinitely all the banks in the United States beginning March 6. The order also gave the Secretary of the Treasury control over all transactions in gold and foreign exchange.

Roosevelt had to move quickly. That week, he met frequently with his financial team, led by Treasury Secretary William Woodin; Cabinet advisers; and representatives from the outgoing Hoover Administration led by former Treasury Secretary Ogden Mills. By the wee hours of March 9, banking legislation had been worked out—the Emergency Banking Act. The Reconstruction Finance Corporation, whose loans to troubled banks under the Hoover Administration had done

nothing to help them, would now purchase capital (stock equity) and capital notes of troubled banks. The purchases would capitalize the troubled banks, without adding to their debts. The Act also had a provision, won by a hard Roosevelt fight, that authorized the district Federal Reserve Banks of the Federal Reserve System to discount previously ineligible assets, and to issue new Federal Reserve notes against them, thereby increasing liquidity for the economy as a whole. And it instructed the Comptroller of the Currency to name receivers for the purpose of shutting down banks that were insolvent.

The Act set up three classifications of banks for action: banks that that were sound and could open under their own power; banks that would require an RFC capital infusion; and banks that a Conservator would liquidate.

At 12 noon on March 9, President Roosevelt sent a message to Congress: “I cannot too strongly urge upon the Congress the clear necessity for immediate action” on the Emergency Banking Act.

Historian William Leuchtenburg described the next tumultuous scene: “Shortly before 1 P.M., Roosevelt’s banking message was read, while some newly elected Congressmen were still trying to find their seats. The House [of Representatives] had no copies of the bill; the Speaker [of the House] recited the text from the one available draft, which bore last-minute corrections in pencil.”

During the debate on the bill, “Speaker [of the House Henry] Rainey [D-Ill.] observed that the situation recalled the world war, when ‘on both sides of this Chamber, the great war measures suggested by the administration were supported with practical unanimity. . . . Today we are engaged in another war, more serious even in its character and presenting greater dangers to the Republic.’ ”

According to the record, Bertrand Snell, the *Republican* floor leader, said, “The house is burning down, and the President of the U.S. says this is the way to put out the fire.” The House voted unanimously for the Act; then the Senate, by 73-7. (A few Senators argued that it would strengthen the role of the New York banks.) The Senate adjourned at 7:52 p.m. Roosevelt signed it into law at 8:37 p.m. The whole affair, from the first introduction to the final signature had taken eight hours.

This demonstrates a vital point: that the emergency banking reorganization that, in the present period, Lyndon LaRouche has proposed for adoption, can be put through; that under emergency crisis conditions, and with a good swift kick to the right place, Congress can act immediately, even against its own previous axioms.

FDR’s Reorganization, and LaRouche’s

On Sunday night, March 12, Roosevelt delivered his first radio “fireside chat” to an estimated 60 million Americans—half the population of the United States—on the banking situation, including that “Some of our bankers . . . had used the

money entrusted to them in speculations.” He told them what the Banking Act contained, and promised the reopening of the banks next morning. Those eligible to reopen under the Act, did so with extra supplies of cash. Yet—and nothing so demonstrates the tremendous confidence that Roosevelt transmitted to the population—on this and subsequent days, American citizens put more money into the banks than they took out.

By March 15, some 70% of the 18,399 nationally chartered banks that had been in existence, sound or unsound, prior to March 3, had reopened without RFC assistance; and 76% were so operating by April 12. During the course of 1933, the Comptroller of the Currency’s appointed conservators liquidated 1,100 banks as insolvent. Another 3,115 nationally chartered banks remained troubled—and closed—but not insolvent. At first, these banks refused RFC cash infusions, but that changed. Soon, banks that had thought that they could operate under their own powers were taking RFC infusions. By June 1935, the RFC had an investment of \$1.3 billion in the purchase of stock and capital notes of 6,800 banks, which meant that the RFC owned more than one-third of all outstanding capital in U.S. banking system. At that point, the RFC decided the banks were stable, and started the disinvestment from them, which it completed in a matter of years.

The 1933 Emergency Banking Act was a partial reorganization: It did not write down a lot of the speculative financial obligations of the banks. To a large extent, the Depression and banking collapse had already wiped out a lot of this speculative financial paper. Under the Act, some banks were placed into bankruptcy, while some were reorganized and wrote off their bad paper, and had their checking and savings accounts strengthened through the RFC’s purchase of some of their capital.

Lyndon LaRouche has presented a far more sweeping bankruptcy reorganization proposal for the banking system taken as an entirety, which would write down tens of trillions of dollars of bad paper, and protect accounts, within the context of creating a National Bank to direct credit into the productive economy.

The 1,100 U.S. banks put out of existence by Federal conservators in 1933, were but a fraction of the number that would have failed without Roosevelt’s action. In 1934, only 61 commercial banks failed; in 1935, only 32. Roosevelt had halted the hemorrhaging of the system.

The Credit Crunch

Simultaneously, Roosevelt needed to get some credit into the physical economy, but the Morgan-Mellon-du Pont banking crowd blocked him, while planning to overthrow him in a coup d’état. In 1931, a depression year in which lending was significantly off its 1929 level, U.S. bank loans to the American economy totalled \$38.1 billion. But by the end of 1935, after two and a half years of the New Deal, U.S. banks—still dominated by Wall Street—had slashed their loans to the



Ferdinand Pecora (right) conducted crucial hearings in early 1933 which exposed the House of Morgan's corruption of America in the "Roaring Twenties," much more thoroughly than "Enron" looting and corruption is being exposed now. Roosevelt made great use of the Pecora hearings.

economy to a level of \$20.3 billion, a fall of 50% from the Depression levels of 1931! Instead of lending, the banks were buying government bonds. In 1929, only 21% of bank funds were invested in U.S. government securities/bonds; but by 1934, it was 58%. The banks were acting to force the productive economy to collapse, and loot the government's bond revenues.

Roosevelt appealed in vain to the bankers, both in public and in private, to work with the New Deal. He knew the Tory treason of these bankers to its pedigree. On the eve of his inauguration, he had written to an acquaintance, "There will be no one in [the Cabinet] who knows the way to 23 Wall Street [the House of Morgan empire, most important arm of British finance in the United States]. No one who is linked in any way with the power trust or with the international bankers."

Seeking to break Wall Street's destructive power over the physical economy, the President worked with the Senate Committee on Banking and Currency and its chief counsel, the colorful and persistent Ferdinand Pecora, who conducted the committee's investigation into how Wall Street built its speculative bubbles. These hearings were launched in 1933. Pecora called J.P. Morgan's son Jack Morgan, now chairman of the banking empire, other top Morgan partners, and other Wall Street leaders before the committee.

The testimony lifted the veil from Wall Street's deliberate building of financial pyramids, and buying of top politicians, including former President Coolidge. The hearings led directly to the Glass-Steagall Act of 1933, which split investment banking from commercial banking, prevented insider loans by banks to their partners, and established the Federal

Deposit Insurance Corporation, to provide government bank insurance of small depositors for the first time in the nation's history.

The Glass-Steagall Act was part of a package of new regulation of Wall Street, including the 1934 Securities and Exchange Act, which prevented various Wall Street speculations and set up the Securities and Exchange Commission. Each of these Acts had useful effect, although each was circumscribed within a particular domain; their power was in their cumulative effect.

Roosevelt acted against the financial royalists on two other fronts. He used every lever of power he had to lower the bank rate on short-term business loans, from 4.7% in 1932, to 2.9% by 1935, and 2.1% in 1939. And he decided to create an instrument to get directed Hamiltonian credit into the economy.

The Reconstruction Finance Corporation was that instrument. We have seen that the RFC had been set up in January 1932, by the Hoover Administration, as an (unsuccessful) bank bailout mechanism; and, that Roosevelt used it under the Emergency Banking Act of 1933, to infuse capital into banks and stabilize the banking system. FDR liked the way that the RFC had been set up. At its inception, it had issued stock, which was bought by the U.S. government, meaning that the government owned it. But the RFC was a self-supporting and self-subsisting public corporation, financed through its own revolving fund, and through selling its own notes to the public through the Treasury Department, could pursue an independent policy.

Now Roosevelt decided to broaden the RFC's scope far beyond its dealings with banks. It made loans for useful purposes of reconstruction, which once paid back, with interest, increased the pool of money that the RFC had to lend again. Thus, it functioned essentially as a *bank*, and by the late 1930s, *the RFC became the largest single investor in economic projects, and biggest bank, in terms of volume of lending, in the United States.* Congress did not have to approve each of the RFC's important projects, given its self-supporting nature outside the Federal budget process.

The RFC Builds the Economy

On entering office, Roosevelt immediately appointed a new RFC director—Jesse Jones, a tall former lumberman and banker from Texas, who shared the President's distrust of Wall Street. By the Summer of 1934, recognizing the well-established pattern of the bankers credit crunch, Roosevelt and Jones moved to make a change. In June, FDR gained from Congress a change in the RFC's charter, which enabled it to make direct loans to business and industry. Roosevelt told an American Bankers Association meeting in 1934, "The old fallacious notion of the bankers on the one side and the Government on the other side, as being more or less equal and independent units, has passed away. Government by the necessity of things must be the leader, must be the judge of the

conflicting interests of all groups in the community, including bankers.”

Under Roosevelt’s prodding, the RFC provided capital for important public agencies, whose activities ranged from preventing home foreclosures, to providing funds for public works employment in infrastructure. During 1933-38, the RFC disbursed \$9.5 billion. While \$4 billion went to banks, more than \$1 billion apiece went to public works and to railroads, \$1.5 billion to agriculture, and hundreds of millions to housing. These were considerable amounts of money at that time, and moreover, the impact of these RFC funds to agriculture, housing, and so on, were multiplied: Where the sums were used for infrastructure construction, they spun off orders which stimulated industry and employment in the private sector.

For example, the RFC extended at least \$500 million to the Federal Emergency Relief Administration (FERA); with these funds, Harry Hopkins ran FERA’s Civil Works Administration, the public works program that built infrastructure and provided jobs to the unemployed. The RFC spent hundreds of millions of dollars purchasing securities from Harold Ickes’ Public Works Administration (PWA), the public works program for great infrastructure projects in the United States. The RFC lent \$246 million for programs carried out through the Rural Electrification Administration, including the construction of power lines across rural America, and the financing of the purchases of electrical appliances by rural Americans. The RFC also lent money to 632 different levee and irrigation districts, so that these districts could construct water-management and flood-control projects.

In 1934, the RFC created the Export-Import Bank of the United States as a division. Initially it financed trade with the Soviet Union; a few years later the Export-Import Bank’s charter was changed, to finance American capital goods and other exports worldwide.

The RFC also set up other public lending corporations, whose stock it owned. The RFC built a multiplier effect into the agencies it created, so that these agencies could lend, over time, 10 to 15 times their initial capital, for useful, vital functions.

Take the desperate home-foreclosure picture. In 1933, 40% of the nation’s mortgages were in default, and thousands of home owners were foreclosed each week, and thrown out their homes. The mortgage-lending institutions were bankrupt. Therefore, the RFC created and owned the Home Owners Loan Corporation (HOLC) in June 1933. The RFC used \$200 million to purchase all of the HOLC’s initial capital stock; the HOLC was then allowed to issue up to \$2 billion in bonds, which it could lend; the amounts increased in subsequent years. The HOLC traded its bonds for shaky home mortgages, and issued cash advances to help homeowners pay taxes and make repairs. In this way, it prevented millions of homeowners from being foreclosed on and evicted. When the Corporation opened for business in Akron, Ohio, a double

column of homeowners stretched for three blocks down Main Street by 7:00 a.m.

When it ceased operations in 1936, the HOLC, using its RFC-backed bonds to raise capital, had lent more than \$3 billion to refinance mortgages, a 15-fold multiple of its initial \$200 million capital base from the RFC. The benefits were enormous: The agency had helped refinance one in five mortgaged urban private dwellings in America. The RFC repeated the process in the farm sector, to prevent the massive foreclosure of family farms. Here, it created the Federal Farm Mortgage Corporation (FFMC), and bought all of FFMC’s stock. By 1936, the FFMC had refinanced more than 20% of all farm mortgages in the country, preventing loss of American farms by foreclosure.

In 1938-39, the RFC’s dirigistic operations through government agencies were dramatically scaled back. But the beginning of the economic mobilization for World War II relaunched the Corporation as an instrument of economic recovery. On June 25, 1940, Congress approved legislation which permitted the RFC to be more flexible in its setting of interest rates, maturities, and amounts and collateral requirements for loans. Over the next five years, the RFC would disburse far larger amounts—almost \$23 billion—in connection with the war mobilization. FDR took top-down control over the economy to wage war. Even the imperious Federal Reserve was made to take orders during 1940-45, and lowered interest rates to 1%.

The RFC’s mode of operation for the war buildup was as follows: It established the Defense Plant Corp., for example, to build plants and equipment. Once built, these plants were leased to industries, which then had the opportunity to buy the plant and equipment. To give an idea of the scope of the operation, the Defense Plant Corp. built 2,300 factories. The RFC’s scope was broader than factories, however; it also funded the Defense Supply Corp., the Metals Reserve Co., the Rubber Reserve Co., and the Disaster Loan Corp.

Altogether, *between 1933 and 1945, the RFC extended \$33 billion in new credit, more than the volume of new loans extended by the entire U.S. commercial banking system during the same period.* And RFC credit was designed to generate multiplier effects. This directed, Hamiltonian credit drove the economy forward.

In 1947, after Roosevelt’s death, the U.S. government’s funds for the Marshall Plan in Europe were administered through the same Reconstruction Finance Corporation. It is no accident that the Kreditanstalt für Wiederaufbau (KfW), which successfully rebuilt Germany after World War II, looks and functions so much like the RFC: Some of its initiators worked to model the KfW upon the RFC’s best features. In 1947, in the first discussions for the prototype of the KfW, the name used was Reconstruction Loan Corporation (RLC). German banker Hermann Abs had his own ideas for credit generation, but he and other Germans were quite familiar with the RFC.



The Tennessee Valley Authority's scores of major infrastructure projects, rapidly completed and accompanied with leaps forward in education, public health, electrification, and sanitation in an economically backward area, were central to the New Deal and became a worldwide model. Here, the Watts Bar Dam and steam-electric plant under construction.

2. Infrastructure

The Depression, while imposing great hardship, also presented the opportunity to transmit new technology through new infrastructure projects, which were urgently necessary in any case, and several of which had waited decades as ideas in the minds of patriots and engineers. The New Deal constructed economic infrastructure that fulfilled three interrelated, integral objectives.

First, Roosevelt built some of the largest great projects of integrated hydroelectric power and water management, in the nation's history. The centerpiece was the Tennessee Valley Authority, which revolutionized an entire economically backward region in America's former Confederacy. With the TVA and other great hydroelectric/water projects serving as national structural pillars, Roosevelt filled in the rest of the expanse of the country with over 45,000 projects in the five basic categories of infrastructure, over the period 1933 through 1939.

Second, the infrastructure employed millions of workers productively, enabling them to restore their labor power and provide for their families (see below).

Third, the infrastructure-public works projects stimulated the economy through the multiplier of the bills of materials ordered. Each project variously required structural steel bars, cement, tile, cranes, earth-moving equipment, machine tools, etc.; factories reopened to produce the goods to fill the orders; they, in turn, rehired workers in that vast portion of the economy that the Depression had shut down.

The economic infrastructure built under Franklin Roosevelt's administrations transformed the physical contour of America forever, permanently increasing the productivity of

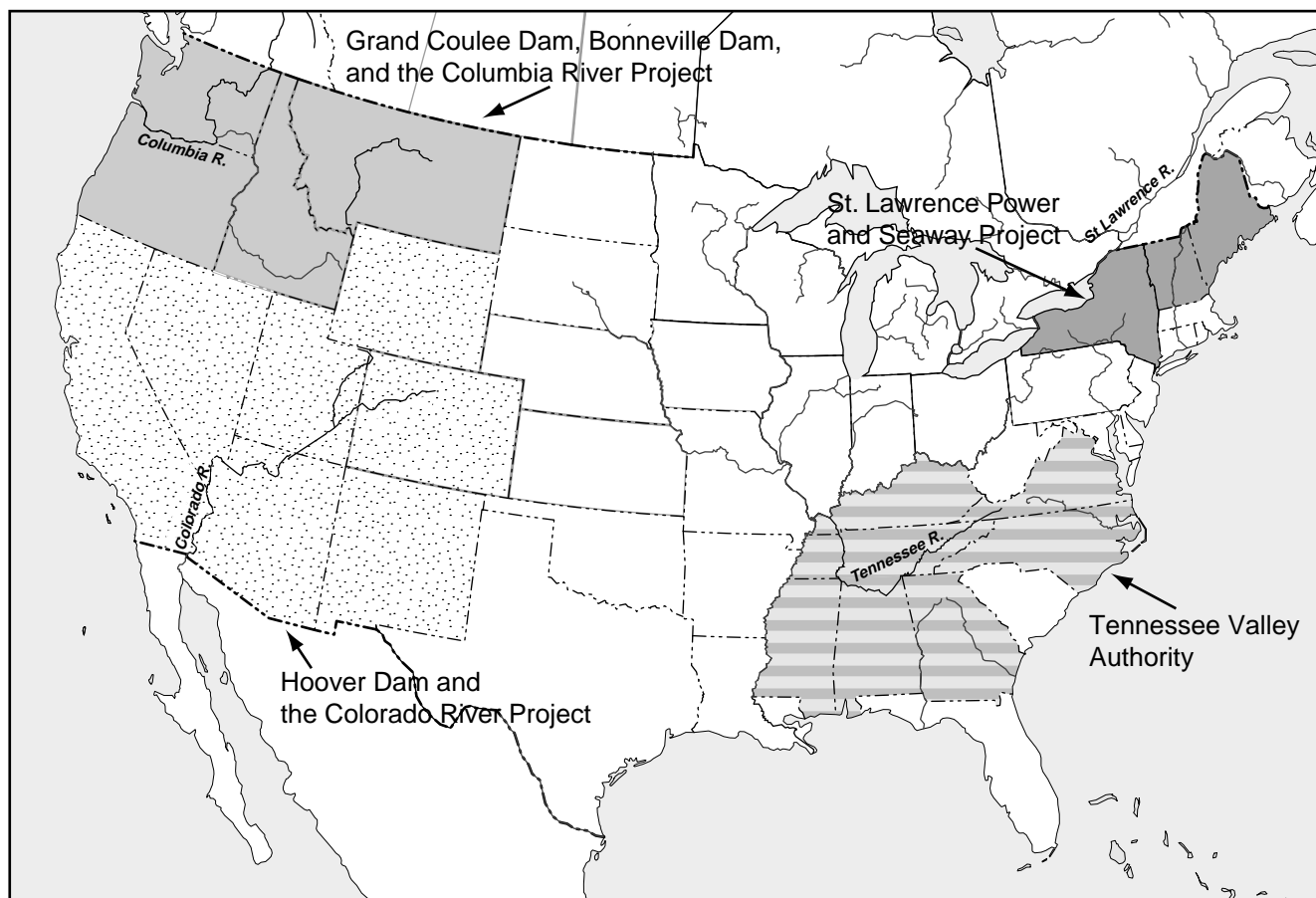
the economy and the productive powers of labor. Really to grasp what he accomplished, it is first necessary to distinguish what the inherent power of infrastructure is. It is no mere list of projects, as Lyndon LaRouche makes clear in his contribution to this report: "The basic economic infrastructure of transportation, water management, energy production and distribution, sanitation, forestation, urban development, and so on, is an extension of the fossil Earth's development, bringing the 'ecology' of our planet to much higher levels of anti-entropic metastability than the Earth could have achieved without us."

The universe is not governed by increasing disorder and entropy. As in the conception formulated by the great Russian scientist Vladimir Vernadsky, and advanced by LaRouche, it is an ordered process, characterized by three multiply-connected categories of universal physical principle: a.) non-living matter; b.) living processes (Biosphere); and, c.) human cognitive processes (Noösphere). Human cognition, in social form, acts upon the biosphere to bring it to greater perfection, through economic infrastructure which embodies the cumulative scientific discoveries of mankind.

In an essay, "The Gravity of Economic Intentions" (see *EIR*, March 30, 2001), LaRouche stated, "From this standpoint, the functional relationship of the Noösphere to the Biosphere, is expressed chiefly as what macroeconomics views as *basic economic infrastructure*. This means, chiefly, *the development of the land-area of a national physical economy as an indivisible unit of action, . . . over a relatively long-term period of not less than approximately a quarter-century, or even much longer.*"

Through this process, man is able to improve the longevity and other demographic characteristics of society, and to in-

Roosevelt's 'Four Quarters' Development Projects



Source: EIRNS.

crease its per-capita useful output within a diminishing required amount of average land-area per capita. There is an increased production of people, each of a higher cognitive quality and standard of living; thereby man increases his power over the universe.

Battle Plan: the 'Four Quarters' Projects

Recall that on Sept. 21, 1932, campaigning in Portland, Oregon, Roosevelt unveiled the bold plan to build four extraordinary infrastructure projects, telling the world his first line of attack to defeat the Depression:

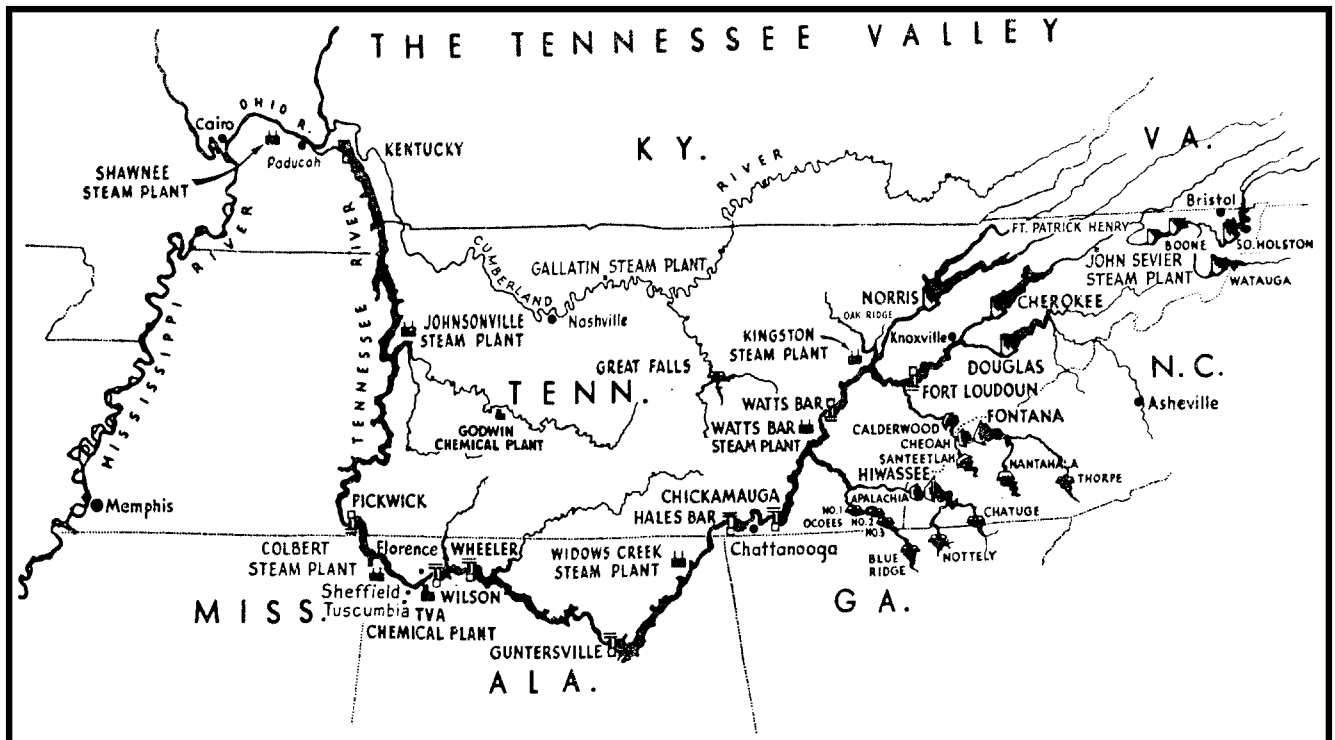
"We have, as all of you in this section of the country know, the vast possibilities of power development on the Columbia River. And I state in definite and certain terms, that the next great hydroelectric development to be undertaken by the Federal government must be that on the Columbia River.

"Here you have four great Government power developments in the United States—the St. Lawrence River in the

Northeast, Muscle Shoals [the initiating project of the Tennessee Valley Authority] in the Southeast, the Boulder Dam [later renamed the Hoover Dam] in the Southwest [on the Colorado River], and finally, but by no means the least of them, the Columbia River in the Northwest [where the Grand Coulee and Bonneville Dams were built]. Each one of these, in each of the four quarters of the United States, will be forever a national yardstick to prevent extortion against the public and to encourage the wider use of that servant of the people—electric power."

Map 1 shows the four development projects, and the regions that they encompassed, which, together, directly affected 22 states. Encapsulated in this idea, was a battle plan to use the four regions as beachheads, which, as an integrated force, would enkindle the development of the United States land-area as an indivisible unit of action. It would eliminate underdevelopment, and generate civilization. It was the opening round of a total assault.

The Tennessee Valley Watershed



Source: Tennessee Valley Authority.

Start with the Tennessee Valley Authority in the Southeast quarter.

The battle to develop the hydroelectric power upon the Tennessee River had started prior to World War I, and a first step was realized when work was begun on construction of a dam on the river at Muscle Shoals, Alabama during World War I. Upon completion in 1925, this dam, named the Wilson Dam, had a generating capacity of 184,000 kilowatts of electricity.

Sen. George Norris (R-Neb.), who, though no part of the Tennessee River touched his native state of Nebraska, saw in the river a great potential contribution to national development, introduced legislation calling for the U.S. government to take over the Wilson Dam—which it had built—and sell its electricity cheaply to the population. In 1928, President Calvin Coolidge vetoed that legislation, and subsequent legislation that Norris would introduce for development of hydroelectric power on other parts of the Tennessee River.

Norris also had to contend with the large electric power trust of Commonwealth and Southern (C&S), a holding company run by J.P. Morgan, that owned subsidiary companies which, in turn, owned and controlled power generation and distribution in most of the Southern states. C&S charged more

for electricity, and denied it to many, thus preventing development. It did not want a project such as Norris proposed, to undercut the C&S price.

What President Roosevelt confronted in launching the TVA—and the reason he launched it—was tremendous underdevelopment. There were two principal reasons for this: first, nature, that is, the river itself and the pattern of rainfall; and second, the presence of the ruinous legacy of the Confederacy.

As for nature, **Map 2** shows the path traversed by the Tennessee River, which starts in the mountains of Virginia and North Carolina, heads southward into Alabama, and then, after travelling along the northern tier of Alabama, heads northward until it reaches Paducah, Kentucky, where it flows into the Ohio River system. The Tennessee River and its tributaries—the French Broad, the Holston, the Hiwassee, the Little Tennessee, and the Clinch rivers—cover a valley watershed of 41,000 square miles that covers all, or portions of, seven states (North Carolina, Virginia, Tennessee, Georgia, Alabama, Mississippi, and Kentucky).

The average level of rainfall in the Tennessee Valley is 52 inches per year, considerably higher than the national average (and in some portions of the Valley, the average rainfall exceeds 80 inches per year). Destructive flooding regularly



At left, a picture of Chattanooga, Tennessee in 1867, after the flooding Tennessee River inundated the entire city. At right, Chattanooga in 1967, with completed reservoirs and a broad, well-banked Tennessee River flowing past a developed city, untouched by floods.

stripped the topsoil from the land, robbing it of its nutrients. There were approximately 4.5 million acres of fertile soil in the Valley, but the flooding limited agriculture to 1.5 million acres, and that could be farmed only sporadically. Industry did not develop in the region, and periodically, the floods would submerge and destroy portions of cities such as Chattanooga, Tennessee.

But there was a second ravaging influence: the continuing legacy of the pro-feudal Confederacy. This had created 70 years of enforced backwardness following the Civil War. Rep. Thaddeus Stephens had led the attempt to carry out Reconstruction after that war, to industrialize the South. But the Confederacy and instruments it spawned, like the Ku Klux Klan, mobilized to stop this.

Thanks to the Confederate legacy, in 1925 the infection rate for malaria was between 30% and 40% in sections of the Valley, and there were other diseases like smallpox and typhoid. Many sections had little sanitation and no hospitals, and in some, rates of adult illiteracy of up to 50% existed. Electricity had not reached many portions of the region: In Tennessee only 3% of farmers had it, and in Mississippi, only 1%.

All in all, there was enforced underdevelopment. The conditions were very similar to those existing in poorer portions of Ibero-America, Asia, and Africa today. In fact, an individual walking into some parts of the Tennessee Valley could just as well be walking into sections of Europe during the Middle Ages.

Roosevelt moved to take down the Confederate influence, and eradicate the underdevelopment.

Building the TVA

On April 10, 1933, President Roosevelt sent to Congress a special message calling for legislation to create a Tennessee Valley Authority. He stated that the TVA “would be a corporation clothed with the power of Government, but possessed of the flexibility and initiative of private enterprise,” which would be funded by the government. “It is clear that the Muscle Shoals development [including the Wilson Dam, which

was the initiating site of the TVA] is but a small part of the potential usefulness of the entire Tennessee River. Such use, if envisioned in its entirety, transcends mere power development; it enters the wide fields of flood control, soil erosion, afforestation, elimination from agricultural use of marginal lands, and distribution and diversification of industry. In short, this . . . leads . . . to national planning for a complete river watershed involving many states and the future lives and welfare of millions.”

George Norris co-sponsored the legislation.

In founding the TVA, Roosevelt appointed three directors: Harcourt Morgan, Arthur A. Morgan, and David Lilienthal, who became its second chairman. In his 1944 book, *TVA: Democracy on the March* (by 1944, there were 20 TVA hydroelectric dams on the Tennessee River system), Lilienthal described some of the physical work.

“In the heat and cold, in driving rain and under the blaze of the August sun, tens of thousands of men have hewed and blasted and hauled with their teams and tractors, cleaning more than 175,000 acres of land, land that the surface of the lakes [reservoirs] now covers. They have built or relocated more than 1,200 miles of highway and almost 140 miles of railroad. With thousands of tons of explosive and great electric shovels they have excavated nearly 30,000,000 cubic yards of rock and earth to prepare the foundations of these dams—an excavation large enough to bury twenty Empire State buildings. To hold the river, men of the TVA have poured and placed concrete, rock fill, and earth in a total quantity of 113 million cubic yards. . . . [which] is more [material] than twelve times the bulk of the great seven pyramids of Egypt.”

The TVA learned how to build hydroelectric dams quickly, using technological innovations. The Fontana Dam, built in southeastern Tennessee, the largest dam east of the Mississippi River, was constructed during only 18 months of 1941-42. It was built around the clock, which required using a newly developed water cooling system, so that concrete that had been poured could be cooled quickly and correctly, in order that new concrete could be poured right next to it.

But especially important was the upgrading of the labor force; American Indians, for example, were assimilated into the Fontana Dam labor force to do critical work. This process is conveyed by a picture in the little museum area located at the Fontana Dam. It shows an American Indian on top of and driving a huge bulldozer, engaged in earth-moving, who has a look, simultaneously, of intense concentration and boundless happiness on his face.

In 1933, there was little power generated in the region, but by 1939, the TVA system produced 2 billion kilowatt-hours; by 1945, it generated nearly 12 billion kwh, a further six-fold increase. Today, it generates 166 billion kilowatt-hours annually.

It should be noted that the enemies of the New Deal did everything they could to try to wreck the TVA. The Morgan-run C&S electric company, and the Morgan-Mellon-du Pont-controlled American Liberty League, brought 57 different legal suits against the Authority to try to stop its work. In January 1938, the anti-New Deal U.S. Supreme Court, after dragging its feet for years, finally ruled on one of the precedent cases brought against the TVA, finding that the TVA was constitutional. Thereafter, work went forward on an accelerated basis.

Revolutionary Change

The TVA incorporated, as an integrated package, hydro-electric generation, flood control, irrigation, scientific agriculture, the fostering of manufacturing, eradication of disease, elimination of illiteracy, and the spread of electrification, to bring about a revolutionary change to a region. The Authority put an end to the flooding, and its attendant destruction. The photo collage shows the dramatic change for one of the region's major cities.

The TVA also spread electricity. In 1933, the average Tennessee Valley resident used, per capita, only 60% as much electricity as the average resident of the United States. But by 1939, the Valley had leapfrogged the country: The average Tennessee Valley resident had 125% of the national average of electricity use per capita. This miraculous change altered every feature of life. The TVA also lowered the price of electricity: In 1933, the average cost of a kilowatt-hour of delivered electricity was a little over 7 cents; by 1935, it was about 2.5 cents, a savings of 65%.

The TVA fundamentally changed agriculture. It set up 15,000 "demonstration farms" throughout the region. On the farms, agronomists worked with the farmers to apply scientific methods that incorporated increased fertilizer use (much of it produced by the TVA itself, and sold at inexpensive prices); increased electricity use, which enabled farmers to use all manner of farm implements; the use of tiering on mountainsides to lessen water runoff, loss of top soil, etc. Between 1933 and 1943, the per-acre yields on the 15,000 TVA "demonstration farms" tripled. Farmers were brought from throughout the region to visit and study the methods of



Tennessee Valley Authority Chairman David Lilienthal wrote in 1944, "Impossible things can be done, are being done, in this mid-Twentieth Century."

the demonstration farms, spreading the increased farm productivity throughout the Valley.

With flood control, and increased electricity, the TVA deliberately brought manufacturing to the region, where it had scarcely existed before. Utilizing the electricity, aluminum plants were constructed there during World War II, to produce aluminum for military aircraft. In 1930, the Valley had four farm workers for every factory worker, but by 1960, it had two factory workers for every farm worker. This stunning shift in the composition of the labor force in only 30 years, represented a rapid industrialization and modernization; and, at the same time, each farmer was more productive.

The TVA, acting as a development organization, tackled other problems. The Authority established its own Health and Safety Department. By the mid-1940s, once-rampant malaria had been nearly eliminated in the Tennessee Valley. The U.S. government and the TVA jointly planned programs with special emphasis on constructing sanitation projects, and instituted immunization against smallpox, typhoid, and diphtheria. To overcome prevalent illiteracy, the TVA, in conjunction with government agencies, brought in books and libraries, including libraries on wheels, to reach people in the outer areas of the region. When the library program began, it was

distributing 52,000 books from 200 locations. By 1951, the regional library services distributed 1.5 million books.

Finally, availing itself of the abundant electricity, the government constructed at Oak Ridge, Tennessee, a nuclear development center, initially part of the wartime Manhattan Project, later one of the leading nuclear science and technology laboratories. A region that had been steeped in backwardness now had one of the top research and development centers in the world.

In his 1944 book, *Democracy on the March*, the famous chairman of the TVA, David Lilienthal, expressed the TVA's higher purpose: "Today, after ten years of TVA's work, at last its boundless energy works for the people who live in this valley. This is true of but few of the thousands of rivers the world over. But it can be true of many, perhaps most. The job will be begun in our time, can well be along toward fulfillment within the life of men now living. There is almost nothing, however fantastic, that (given competent organization) a team of engineers, scientists, and administrators cannot do today. Impossible things can be done, are being done in this mid-Twentieth Century."

The TVA had accomplished a revolution in demographics and potential relative population density for the whole Tennessee Valley region. It was strikingly clear that under Roosevelt, the TVA was a successful model of how a region *in any part of the world*, beset by enforced underdevelopment, could leapfrog onto the path of development and growth.

Source of Development Planning

Many nations looked to the TVA as a source for planning and a model for integrated regional development, and sent their representatives to visit. The Authority helped develop the grand conception of China's Three Gorges Dam on the Yangtze River. From its inception, the TVA worked with engineers and statesmen from China. Before the war, engineers from the National Resources Commission of China visited the TVA, and during the war, an electrical engineer from

MAP 3
The Colorado River Basin



Source: Bureau of Reclamation.

the TVA was an adviser to the Chinese War Production Board. Hu Shih, China's ambassador to the United States, and chairman Lilienthal developed a close relationship. In 1939, Ambassador Hu suggested to Lilienthal that at the war's conclusion, TVA should work with China in its reconstruction. They met to plan the multipurpose dam development of the Yangtze River. In December 1944, some 26 Chinese industrial representatives toured the TVA region and held ten days of discussions. They bore gifts and personal greetings from the chairman of the National Resources Commission of China.

On Feb. 6, 1945, Lilienthal met with Don Nelson, who had headed the U.S. War Production Board, and was now going to China as Roosevelt's personal representative. At their meeting, Lilienthal and Nelson discussed the Yangtze Three Gorges project as a Chinese "TVA."²

Plans to create TVAs in many parts of the world, follow-

2. For much more on the extraordinary international work and influence of the Tennessee Valley Authority, see Marsha Freeman, "Roosevelt's TVA: a Model for Global Development," *EIR*, June 12, 1998.



The Southwest of Franklin Roosevelt's "Four Quarters" of national infrastructure renewal, was anchored by the Hoover Dam, the highest in the world for half a century afterwards.

ing World War II, were developed and presented. A plan for the Jordan River in the Middle East was not completed because of British instigation of wars. A TVA project, the Khuzistan Water and Power Authority, was developed in Iran in the 1960s. Projects were developed for India, although here too the British engaged in sabotage. It was at the Oak Ridge laboratories, in Tennessee, that researcher Perry Stout developed a study entitled, "Potential Agricultural Production from Nuclear-Powered Agro-Industrial Complexes Designed for the Upper Indo-Gangetic Plain." These "nuplexes" incorporated nuclear power plants, manufacturing facilities, transportation systems, etc.

Franklin Roosevelt had intended to build six additional "TVAs" in the United States, and many around the world. Within today's overarching mission of bringing the Eurasian Land-Bridge into existence, such work is still appropriate.

The Other Pillars of Development

As the TVA was realized, Roosevelt moved to build the other three "quarters" of infrastructure development, which would not only change the region in which they acted, but converge to act on the United States as a whole. These were the leading pillars of the national crash mission. What they achieved can be succinctly reported.

The pillar of the Southwest quarter was the Hoover Dam. The Colorado River starts in the Rocky Mountains of Wyoming and Colorado, and runs southward through Arizona and

Nevada (**Map 3**), draining an immense watershed of 250,000 square miles, including areas in seven states. In the Spring, the swollen river would create violent floods, while farther out in the surrounding region, marked by wide stretches of desert, human and biospheric life were starved for water.

Construction of the dam project had started in mid-1931, under the Hoover administration, but it did not accelerate until the Roosevelt administration took charge. The project chose as its damsite the Black Canyon, near Las Vegas, Nevada. The site was a gorge with a very steep drop. Daily temperatures there could reach above 100 degrees. Since the damsite was in an isolated, barren area, everything necessary had to be moved in and/or constructed there: machine shops, air compressors, two huge-concrete mixing plants, warehouses, housing "townships" for the workers, etc. To provide the area with power, a 220-mile-long power line had to be strung across the blazing desert from San Bernardino, California.

The damsite to be constructed started 800 feet below the upper rim of the canyon, and a good deal of it was unreachable by normal means (see the photograph). This presented a huge engineering challenge: Aerial cableways, spanning the canyon, were constructed, and critical elements were lowered into the canyon. An entire modern city was built for the workers who came to the area, according to one history, "in broken-down cars, and some walked. Some were undernourished. . . ."

Upon completion, the 726-foot-high structure, then the

Columbia River Basin



Source: U.S. Army Corps of Engineers.



The central New Deal infrastructure project of the “Northwest Quarter” built the Grand Coulee Dam on the Columbia River in Washington State (above), and the Bonneville Dam in Oregon.

world’s highest dam by about 300 feet, incorporated many technological innovations, including original twin diversion tunnels. The U-shaped power plant at Hoover Dam initially generated 1.33 million kilowatts (gigawatts) of power. The Hoover Dam directed the once wild Colorado River, after capturing its hydroelectric power, to travel in an orderly fashion, through the All-American Canal constructed at that time, to the Imperial Valley in southern California. This formerly desert area, receiving the water, became the nation’s largest vegetable-growing region. The Hoover Dam, through a specially built canal and pump system, also directed the Colorado River to provide much of the fresh water for the City of Los Angeles. Together, the dam’s generation of abundant electricity and provision of fresh water made the desert bloom and spawned industrial growth, population growth, and city-building in the Southwest/Far West quadrant of America, much of which had once been uninhabitable.

The Grand Coulee and Bonneville Dams were the great projects envisioned by FDR for the Northwest Quadrant. The Columbia River has one of the greatest volumes of water flow, per second, of any river in the world. Its headwaters arise in British Columbia and then, heading southwards, the river flows into the American states of Washington, Oregon, Idaho,

and Montana (**Map 4**). The Columbia River watershed covers an immense 220,000 square miles of territory in the American Northwest (and an additional 39,000 square miles in western Canada). Periodically, the river would overflow, creating deluges, while a large section of the Northwest’s fertile soil could not be developed fully for lack of irrigation.

A chain of hydroelectric and river diversion dams was built on the Columbia River and its tributaries, of which the crown jewels are the Grand Coulee Dam, in Washington State, and the Bonneville Dam in Oregon. Each dam represents a technological wonder. The Grand Coulee is 530 feet high and 4,173 feet long, and contains 10.5 million cubic yards of concrete, making it the world’s largest concrete structure. Due to its huge generators, it was the world’s largest hydroelectric plant up until the 1980s, when Brazil’s Itaipú Dam’s generating facility was built. The efficiency of Grand Coulee’s and Bonneville’s hydro-power pushed the price of electricity down to less than 2 cents per delivered kilowatt hour. During World War II, this abundant, cheap electricity led Alcoa and Kaiser Aluminum to open up aluminum plants throughout the Columbia River basin, and Boeing Company to build its major aircraft factories in Washington State. The Columbia River-based great infrastructure project built a tremendous potential for growth, still largely to be tapped, into the vast region. The fertile soil, now irrigated with water from the Columbia River, has blossomed.

Finally, the infrastructure mission in the Northeast Quadrant centered on the St. Lawrence River, which runs northeastward, between the United States and Canada, as an outlet for the Great Lakes all the way to the Atlantic Ocean, with potential for hydroelectric power all along the way. (See **Map 5**.) Roosevelt worked on trying to realize such power from 1911, when he was a New York State Senator, throughout

St. Lawrence Seaway



Source: Canadainfolink Web Site.

his whole life. Lacking the treaty with Canada required for development of the project, Roosevelt could not build it during his lifetime. But when consummated in the 1950s, it realized all the promise he had foreseen.

These four great projects transformed immense regions, and the first three of these, during the 1930s and 1940s, had a remarkable effect on increasing productivity for the United States as a unit area.

There were many other great projects, of which the Rural Electrification Administration, and the Mississippi River control projects, deserve special attention.

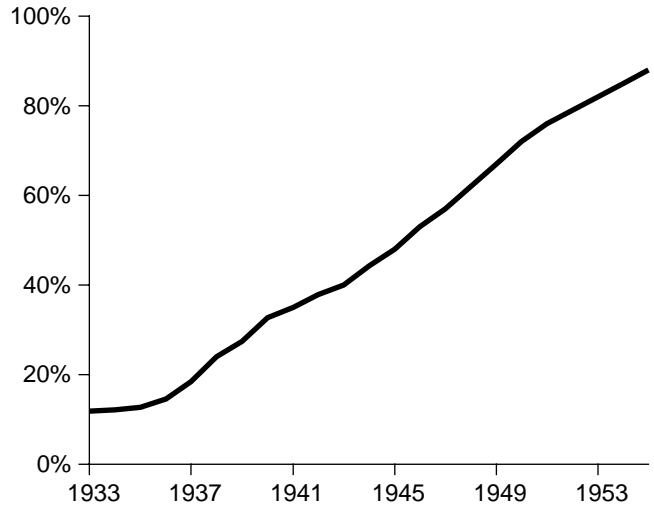
In 1934, some 49.2 million rural Americans did not have the use of electricity—that was 89% of those living in rural areas—and 39% of all Americans were without electric power. Roosevelt produced a great increase in capacity, but the question was how to get the power to rural America. In 1935-36, he created the Rural Electrification Administration (REA) to electrify the countryside. The REA set up and extended loans to rural cooperatives, to purchase electricity and build transmission lines. By the mid-1970s, the REA program included 1.8 million miles of power transmission lines, 50% of the nation’s total. **Figure 1** shows that in 1933, only one in ten American farmers had electricity; this rose to 48% by 1945, and to 88% by 1955, as the REA and New Deal projects came on line. The productive potential of rural communities was elevated.

The Mississippi River, third largest in the world, flows north-south from above Minneapolis-St. Paul in Minnesota, through the heart of America on its way toward emptying out in the Gulf of Mexico (see **Map 6**). The mighty Mississippi’s periodic floods destroyed animal life, human life, and cities, such as New Orleans, Louisiana. Though it was used for navigation, its plentiful shoals, shallows, and other impediments, plus raging floods, made portions of the river difficult to navigate or unnavigable. With Roosevelt pushing the process, the Army Corps of Engineers built a unified flood control and river diversion program, with a series of 28 major locks and

FIGURE 1

American Farms With Electricity, 1933-55

(percent)



Source: National Archives of the United States, U.S. Dept. of Agriculture.

Map 6

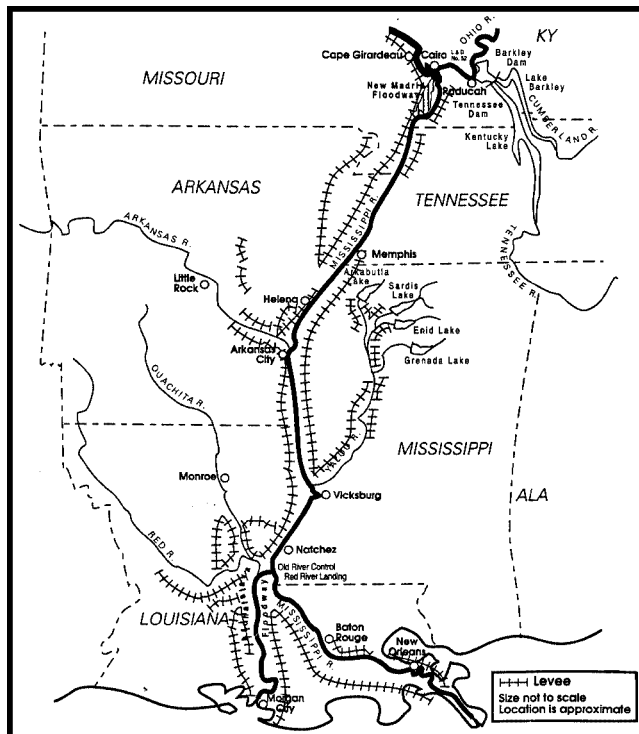
The Mississippi River



Source: EIRNS.

MAP 6a

Lower Mississippi River



Source: U.S. Army Corps of Engineers.

dams, reservoirs, levees, etc. (See **Map 6a.**) The flooding was stopped south of Cairo, Illinois, 15 to 20 million acres of overflow lands were reclaimed, and the river was made navigable. Within 15 years of the start of this ambitious undertaking, water-borne freight traffic increased five-fold.

In concert, the great “four quarters” infrastructure projects, along with the Rural Electrification Administration and the infrastructure activity upon the Mississippi River, produced a dramatic increase in the productive powers of labor for each of the affected regions, and for the United States as a whole.

Waves of Basic Infrastructure

Now, Roosevelt’s administrations filled in around these pillars, and built all the basic types of infrastructure in abundance. Over 45,000 infrastructure projects were built: bridges, tunnels, sewage treatment plants, fresh water provision, hospitals in locales without medical facilities, and thousands of schools. We can see the revolutionary effect that the medium- and small-scale infrastructure had, if we give an accounting of it in the following way: Rather than attempting to review the projects—an impossibility here—we present Public Works Administration (PWA) maps for the basic types of infrastructure, showing the immense scale of what they con-

MAP 7

Location of Major PWA Hydroelectric Dam Projects in 1930s



Source: Public Works Administration.

MAP 8

Allotments for Electric Power Projects



Source: Public Works Administration.

structed, and then consider leading examples.

Dams and hydro projects. The report has already discussed some of the great dam and hydroelectric projects. **Map 7** shows the rest. Roosevelt built 43 major dam and hydroelectric projects in 22 states. He also built over 450 medium- and smaller-sized dams.

Power plants. Roosevelt built 250 power plants for local governments, shown on **Map 8.**

Sewage and water treatment/sanitation. In 1933, more than 40% of America’s urban population did not have sewage treatment. **Map 9** shows the construction of over 1,000 sew-



The Mississippi flood of 1927, near Cairo, Illinois. New Deal flood-control construction by the Army Corps of Engineers, stopped the perennial flooding completely from Cairo south to the Gulf of Mexico (map 6a). Flood control on the Mississippi's northern sections was not pursued under later Presidents, so severe flooding still occurs there.

MAP 9

Location of PWA Sewage Disposal Projects



Source: Public Works Administration.

age systems throughout the United States. In 1934, the Roosevelt administration built a breakthrough sewage treatment plant in Chicago that required alteration of the Chicago River, so that it wouldn't reverse course; a system of street laterals that emptied into larger and deeper tubes, ending up in the great interceptors, far below street level, that were approximately the size of subway tubes, etc. When completed, *it was double the size of any other treatment plan in the world.* It removed solids from 400 million gallons of sewage a day, served 1.5 million people, and poured purified water back into the river. Between 1934 and 1938, the New Deal constructed more sewage-treatment plants in New York State than had been built there during the previous 30 years.

MAP 10

PWA Program of Hospital Construction



Source: Public Works Administration.

Health and hospital systems. In the 1930s, in Florida, between 500 and 1,000 people died every year from tuberculosis, yet the state did not have a single hospital dedicated to tuberculosis treatment and cure. In sections of the South, hospital treatment was primitive.

In 1937, President Roosevelt mobilized to conquer the problem with indicative planning. He set up an Inter-Departmental Committee to Coordinate Health and Welfare Activities. A technical committee of this broader committee was created, which made a survey of the nation's health needs. In July 1938, Roosevelt called a national conference, at which the technical committee presented its findings. It found that 40% of the counties in the United States did not have a single registered general hospital!; that 60% of the states had fewer hospitals than could be considered adequate; and that there was an acute shortage of pure drinking water and sanitary sewage systems. The President's approach was to build hospitals to an indicative level *per thousands of population* (Map 10). Between 1933 and 1939, the New Deal effected an increase of 121,760 hospital beds nationwide.

After the war, New Dealer Senator Lester Hill (D-Ala.) introduced the Hill-Burton Act of 1946, which codified and brought to fruition the Roosevelt policy of indicative hospital planning and construction, by county, with Federal assistance.

Public Works Authority waterworks projects. The thousands of projects for fresh water provision are shown on Map 11. Note that FDR's administration deliberately built infrastructure projects in the South. Were it not for the New Deal, the economy of the American South would hardly exist today, to sustain the likes of Sen. Phil Gramm (R-Tex.) to complain against the New Deal.

Transportation. The Roosevelt administration constructed every fundamental form of transportation, from tun-

MAP 11

Location of PWA Waterworks Projects



Source: Public Works Administration.

MAP 12

PWA Program of Educational Building Construction



Source: Public Works Administration.

nels, bridges, and rail, to ports and waterways. The PWA lent money to the Pennsylvania RR, America's largest Eastern railroad, to carry out a marvelous electrification project, which allowed it to build 68 electric locomotives, and buy another 33 electric locomotives and 93,787 tons of rail. The PWA also built the Chicago Loop elevated subway. And the New Deal allotted funds, primarily to the Army Corps of Engineers, to widen, deepen or improve almost every major harbor on the East, South, and West Coasts of the United States.

Education. In March 1933, an earthquake struck Los Angeles, Long Beach, and other cities in southern California, tearing apart the walls and foundations in many schools. The California state legislature passed legislation requiring the schools to meet earthquake construction standards, but lacked the money to address the problem. Accordingly, the children were going to school in make-shift tents, bungalows, and temporary shelters. The Public Works Administration stepped in to provide more than half the funding to rehabilitate, or construct anew, 536 school buildings, capable of withstanding earth shocks greater than those experienced in the past.

Map 12 shows Roosevelt's school construction. Between 1933 and 1939, the New Deal accounted for more than 70% of all school construction nationwide, building about 60,000 classrooms with seats for approximately 2.5 million children.

Franklin Roosevelt's New Deal had built positive growth and productivity into the economy for a generation to come.

3. Public Works Employment

On June 6, 1933, President Roosevelt signed into law the National Industrial Recovery Act. The NIRA was a mixed bag of conflicting policies, but Roosevelt emphasized its Title II—"Public Works and Construction Projects"—as

critical to his recovery measures. It established the Public Works Administration as an agency through which the U.S. government would hire unemployed workers in Federal public works, building everything from ports and flood control, to bridges and transportation. Title II authorized, over two years, spending \$3.3 billion—nearly 30% of U.S. Federal budget expenditures—for public works. This was the largest amount to be spent on public works in the nation's history.

Roosevelt stressed putting people to work as a top priority in his March 4, 1933 inaugural address, and mobilized the American people behind this national mission. Unemployment had risen, officially, to 12.83 million people, or 24.9% of the labor force, by January 1933. But it was more pervasive than that, as Roosevelt knew. In Detroit, in early 1933, according to a representative of the Mayor's office, about 350,000 out of the city's 689,000 potential wage earners—more than half—were totally unemployed, and many others were working only short time.

National unemployment insurance did not exist until Roosevelt later created it, and only two states had a state unemployment insurance system. Workers who had lost jobs had to rely on state and local "relief," and the Depression, by mid-1932, had exhausted that relief or reduced it to a pittance. Private charity assistance was also largely exhausted, even as it has, during 2001, shrunk today.

The Public Works Administration which the NIRA created was directed by Harold Ickes, who was also Roosevelt's Interior Secretary. By November 1933, a second public works organization was created, directed by Harry Hopkins, called the Civil Works Administration (its successor organization would be the Works Progress Administration). The third public works agency, the Civilian Conservation Corps, mostly hired youth.

These public works organizations had three purposes:

building hard and soft economic infrastructure; providing wage employment to restore the nation's labor power and sustain families; and multiplying their own effect through the purchase of the bill of materials used in the public works. During the 1930s, these public works literally restarted the economy, employing directly an average of 3.1 million workers per year, and including their multiplier effects, in direct and indirect employment, giving combined direct or indirect employment to approximately 7.1 million workers per year.

The Civil Works Administration

Franklin Roosevelt's close collaborator in the field of public works, was Harry Hopkins. Born in 1890 in Sioux City, Iowa, Hopkins moved to New York State, and during the mid-1910s, as director of the New York Tuberculosis and Health Association, did a brilliant job in taking on the scourge of tuberculosis, by attempting to eradicate the medical, housing, and sanitation conditions that gave rise to the disease. Hopkins headed Gov. Franklin Roosevelt's relief operations in New York State during 1931-32. Later, he served as one of Roosevelt's most trusted confidants and emissaries in relations with Russia during World War II. Frequently appearing disheveled, the lean, loose-limbed, and astute Hopkins often wielded an acerbic wit, and had a determination to carry out what Roosevelt asked him to do.

The first New Deal organization that Hopkins was to head was the Federal Emergency Relief Administration (FERA), created May 12, 1933 to provide unemployed relief. A mark of the Roosevelt administration was that it focused not so much on formal organization, as on the purpose to be accomplished. On May 20, 1933, his first day on the job, Hopkins met with President Roosevelt to discuss what had to be done. He had no formal organizational chart and no office. Historian William Leuchtenburg described what Hopkins did first: "A half-hour after Hopkins left the White House, he placed a desk in the hallway of the RFC [Reconstruction Finance Corporation] building. Amidst discarded packing cases, gulping down endless rounds of black coffee, and chain-smoking cigarettes, he spent over \$5 million in his first two hours in office."

Hopkins judged work to be better than relief for the unemployed. Toward the early Fall of 1933, he had heard of weather reports—which proved to be true—that the Winter of 1933-34 would be very severe, and he knew that workers would need incomes to survive. Hopkins persuaded President Roosevelt to establish, on Nov. 9, 1933, the Civil Works Administration within FERA. Roosevelt diverted some of the \$3.3 billion that had been dedicated to public works under the NIRA Act, to the CWA's public works.

There was a distinction between Hopkins' CWA (and later, the Works Progress Administration he headed), and Harold Ickes' Public Works Administration. Hopkins' CWA's principal mission was to build medium- and small-scale infrastructure. His projects, by design, were to employ



Franklin Roosevelt's close collaborator in the public works revolution, Harry Hopkins, head of the Works Progress Administration.

as many people on relief as possible, and to be set up and launched as quickly as possible. Ickes' PWA's principal mission was to build larger infrastructure, including great projects like the Grand Coulee Dam. By design, Ickes' projects were to employ a mix of skilled, semi-skilled, and unskilled workers. Several projects required long-range planning before they could start.

In operation, Hopkins' CWA demonstrated a crucial principle: that if one is properly motivated, one can employ a huge number of unemployed in productive work on an accelerated basis; public works can be effective immediately.

The CWA began operation on Nov. 9, 1933. *Ten days later*, Hopkins was employing 800,000 people on CWA payrolls. Two weeks later, the CWA employed nearly 2 million people. Nine weeks—in the week ending January 18, 1934—after the CWA had been started, the CWA had its peak employment: 4,263,644 men and women.

Colonel John C.H. Lee, an officer in the Army Corps of Engineers known for his highly demanding administrative attitudes and techniques, in the words of one historian, "watched Hopkins' unorthodox methods with astonished admiration." Lee wrote to a friend, "Mr. Hopkins' loose fluidity of organization . . . enabled him to engage for employment in two months, nearly as many persons as were enlisted and called to the colors during our year and a half of World War mobilization. . . ." The young administrator and "the group of able young assistants which he has assembled and inspired . . . have worked daily long into the night with a morale easily comparable to that of a war emergency."

Hopkins began to break the downward spiral of living standards.

Frank Walker of Montana, who headed President Roosevelt's National Emergency Council, reported what he saw in his home state: "old friends of mine, men I had been to school with—digging ditches and laying sewer pipe. They were wearing regular business suits as they worked because they couldn't afford overalls and rubber boots. . . ." Yet these men were happy. "Do you know, Frank," one of them said to Walker, "this is the first money I've had in my pocket for a year and one-half?"

The 'Make-Work' Lie

Yet, the lies of Morgan-Mellon-du Pont banking circles, and their political arm, the American Liberty League, invented 70 years ago against the Roosevelt public works projects, are repeated today by such circles as the Mont Pelerin Society, and Al Gore's Democratic Leadership Council. The Morgan faction labeled the public works "make-work," and "useless boondoggles." Countered with the truth, they raised their press and radio voices louder, shouting the same lies.

Consider what the CWA did during its brief period of existence between Nov. 9, 1933 and late March 1934. Its millions of workmen built or improved thousands of miles of city street and secondary roads; constructed or remodeled thousands of school buildings; created scores of airfields and improved as many existing ones; laid miles upon miles of sewer line; and constructed or improved hundreds of parks, playgrounds, stadiums, and swimming pools. CWA workmen renovated Montana's State Capitol Building and helped erect Pittsburgh's Cathedral of Learning. Among its other functions, the CWA employed 50,000 teachers to keep rural schools open and to teach adult education classes in the cities, and made it possible for unemployed Boston teachers to return to schools.

Still, the City of London-Wall Street financiers wanted to shut down the CWA program precisely because of its initial success in reconstructing the economy. They used their instrument inside the Roosevelt administration, monetarist Budget director Lewis Douglas, who was dubbed the "Minister of Deflation," to shut it down. Amid allegations that the CWA soon would lead to a permanent class of "people on the public payroll," on Feb 15, 1934, Douglas instructed Hopkins to dismantle the CWA. Within six weeks, Hopkins had to fire all of CWA's 4 million workers. London and Wall Street's method of sabotaging the New Deal was thus set—either through Congress, or through instruments inside the administration, it would ceaselessly attack the New Deal's spending.

In April 1935, Roosevelt succeeded in securing another appropriation for public works/infrastructure, two years after the first. Congress passed and Roosevelt signed into law, the Emergency Relief Appropriation Act, with the intention, again, of putting to work 3.5 million workers. The Act appropriated \$5 billion, the largest public works appropriation in

history.³ The Act established the Works Progress Division, quickly renamed the Works Progress Administration (WPA), and headed by Harry Hopkins. On the small and medium-size infrastructure projects typical of the CWA before it, Hopkins' WPA only employed 220,000 workers in 1935; but in 1936, 1937, and 1938, it employed an average of 2.3 million unemployed each year.

The NIRA Act of June 16, 1933 had created the Public Works Administration, headed by Harold Ickes. Ickes was born in Blair County, Pennsylvania in 1874; at age 16, he moved to Chicago; he was a progressive Republican in the Lincoln tradition, and was involved in the fight for civil rights (Eleanor Roosevelt and he were those most responsible for organizing Marian Anderson's outdoor concert at the Lincoln memorial in April 1939). Having thick features and gold-rimmed glasses, blunt, irascible, with a charge-ahead personality, Ickes was incorruptible and willing to go out front for Roosevelt, when others did not wish the publicity.

Collaborating with the Army Corps of Engineers, Ickes' PWA built great infrastructure projects, like the "four quarters" and Mississippi-region projects outlined above, spending a considerable amount on capital goods in the process, while employing 400,000-700,000 workers per year. This agency also participated in joint Federal-local government infrastructure projects, in which it made a combination of loans and grants to the local government institution involved.⁴

3. Franklin Roosevelt is often accused of running up budget deficits by public works spending, but this is a fallacy of composition. During the Depression, Federal tax revenues plummeted; the question was how to increase tax revenues through increasing economic activity. Under the impact of Herbert Hoover's budget-cutting, the U.S. budget deficit increased to \$2.735 billion in 1932. Had Hoover remained in office and pursued his failed policy, the deficit's tendency would have been to rise to \$4 to \$5 billion a year.

During the five years 1933-37, Roosevelt's budget deficits averaged \$3.245 billion per year—about \$500 million more than budget-cutter, President Hoover's level. But the *contents* of the two budgets were completely different: Roosevelt's budgets built tremendous infrastructure, put people to work, and paid unemployment benefits, creating, within the overall New Deal policy measures, a recovery. Hoover's budgets did nothing to restart the economy.

4. The PWA developed a novel, but useful way to aid cities and towns to finance the building of infrastructure. The Depression had left citizens unable to pay local property and other taxes, without which cities and towns could not maintain capital investment for infrastructure. In June 1933, even good municipal bonds were quoted at 30-40% discount, meaning that investors were not buying them. Further, the yield on a bond for 20 "standard" cities, as reported by *Bond Buyer* magazine, stood at 5.7%, an interest rate far too high for a city or town to pay in a depression.

The PWA set up a financing mechanism: first, it would purchase the bonds of a city or town at full par value, disregarding the "market" discount. Second, any qualifying municipality could issue a new bond at a 4% interest rate—rather than the prevailing yield of 5.7%—and the PWA would buy it. This rejuvenated the municipal bond market, enabling municipalities to engage in infrastructure building; and, as cities recovered and paid off their bonds with interest, the PWA made money.

In addition, once a local infrastructure project was designed and approved, the PWA would pay, through grants and loans, more than 50% of its construction cost.

The other job-creation legislation of 1933, which set up the Civilian Conservation Corps (CCC), was largely conceptualized by FDR himself. The mostly young men in the Corps—or CCC’ers, as they were known—were paid \$1 a day, and provided with food, clothing, and lodging in the famous “CCC camps.” Hundreds of thousands of young men each year were deployed to do useful work, primarily in rural areas and woodlands. One novel idea they carried out, in part conceived by Roosevelt, was to plant rows of trees along a several-hundred-mile north-south line in the Midwest, as a windbreak, to prevent the erosion of soil, and to prevent the appallingly destructive “Dustbowl” effect. The CCC’s purposes included river and stream diversion, and everything from clearing forests of underbrush, to building rural dams.

To arrive at the contribution of public works to the annual level of employment, if one takes the employment of the major public works programs, between 1933 and 1938, that contribution varied from a low of 900,000 (a year when neither the CWA nor the WPA was in existence) to a high of 4.01 million workers. Focusing on the years that the three major public works programs (WPA, PWA, and CCC) had employment, the average level of U.S. public works employment was 3.1 million workers per year.

Reviving the Private Economy, Rehiring Workers

The public works programs, by placing orders for goods to build the infrastructure projects, stimulated the *private* economy to produce these goods, reopening shut-down factories, rehiring laid-off workers; the public projects were used to revive the broader economy.

If one fosters infrastructure projects, they stimulate the production of volumes of raw, semi-finished, and finished goods that go into the infrastructure construction. For example, the construction of the Bonneville Dam required a bill of materials which included tractors, cranes, earth-movers, turbine-generators, electrical transmission lines, machine-tools, flow-ways, etc., as well as structural steel bars, cement, hollow tiles, etc.

Now imagine the thousands of public works projects that Roosevelt built each year, yielding, collectively, an immense bill of materials. This required a tremendous supply of these materials, through cranking up production. *The public works infrastructure ignited and drove the entire economy’s recovery.* We can depict this process in the period 1934-37, in **Table 2.**

Table 2 shows the primary phenomenon: The Public Works Administration’s infrastructure projects consumed each year an immense percentage of the United States’ total production of critical goods used in the industrial and construction process. For the three years 1934-36, of the United States’ total production, the PWA projects consumed, on average, 31.0% of all brick and hollow tile; 42.4% of all cement; 33.2% of all structural and reinforcing steel; 32.3% of all cast-

TABLE 2

Materials Purchased for PWA Construction Projects

Percentage of PWA Orders to U.S. Total Production, 1934-37

Type of Material	1934	1935	1936	1937
Brick & Hollow Tile	23.5	26.9	42.7	22.7
Cement	73.6	36.8	16.8	13.2
Structural & Reinforcing Steel	39.8	35.9	23.8	12.3
Cast-iron Pipe Fittings	35.0	30.0	31.8	17.7
Sand and Gravel	37.7	26.6	16.6	9.9

Source: Public Works Administration.

iron pipe fittings; and 27.0% of all sand and gravel. These are semi-finished goods and raw materials, and the PWA infrastructure projects were also consuming important percentages of other semi-finished goods and raw materials, such as wood, copper, zinc, and so forth.

These infrastructure projects also consumed significant percentages of finished goods, in particular capital goods. Though lacking exact figures, it can be estimated that the PWA infrastructure projects consumed 25% of the cranes, earth-moving equipment, electrical generators, pumps, as well as machine tools, that United States factories produced.

To produce these cranes and machine tools required, in turn—through their own bill of materials—steel, copper, and so on. The PWA projects sent waves of production stimulation through the economy, reviving production overall.

In 1936, the PWA projects’ percentage of total consumption of semi-finished goods declined. This showed a healthy further process: Other sectors of the U.S. economy were reviving, and as they did, they consumed a greater volume and therefore greater percentage of the materials listed above, even with PWA’s construction activity remaining at a high level. And we have indicated only the PWA infrastructure projects’ percentage of consumption of these goods; Harry Hopkins’ WPA also consumed structural steel rods, earth-moving machines, sand and gravel, and the rest of the bill of materials. The influence upon the whole economy would be greater if this WPA consumption were included.

The Job Multiplier

Just as the public works projects caused a revival of the broader private-sector economy, they also led to the rehiring of workers in the private sector. We can call this the “job multiplier effect” of the projects. We have already seen that when all three major infrastructure-public works programs were active at once, they gainfully employed approximately 3.1 million workers per year. How many additional jobs did they create through the “job multiplier effect”?

In 1939, the PWA commissioned a study to determine the number of jobs that it created in other parts of the economy.

It was characteristic of the PWA that its contractors submitted a certified copy of their payrolls to the local sponsor—state, country, or city government—which in turn submitted it to the PWA engineer on the job. This statement showed the number of men employed on the construction site, how long each worked, and how much each was paid. The contractors also submitted material orders, showing how much materials had been used, where they came from, and how much they cost.

The Bureau of Labor Statistics of the U.S. Department of Labor then studied the data, and found that PWA projects had *directly* employed 1.715 billion man-hours of work at construction sites through March 1, 1939 (with most of that work being completed by mid-1937). It then concentrated on how many jobs were created in the industries that produced raw materials and semi-finished goods (it did not focus on the capital goods industries). The BLS found that PWA projects had created approximately 3.179 billion man-hours in *indirect* employment in the industries that produced raw materials and semi-finished goods (and secondarily, those that distributed these goods). Thus:

1.715 billion man-hours of direct PWA employment

3.179 billion man-hours of indirect employment

4.894 billion man-hours of total employment

A large part of the 3.179 billion man-hours of indirect employment, were in the productive economy. In summary, each single job in the PWA created 1.85 indirect jobs in the private economy.

Clearly, if one were to include, in addition, the jobs created by the PWA infrastructure projects in the industries that produced capital goods (omitted in the 1939 study cited above), the “job multiplier effect” would be higher than 1.85 private jobs for one public works job.

To roughly calculate how many jobs the PWA, Harry Hopkins’ WPA, and the Civilian Conservation Corps created in the private economy, we may conservatively assume here a ratio of only one public-works-infrastructure job creating one job in the private sector. There are many reasons for making this conservative assumption, but the principal reason is that the more numerous jobs of Harry Hopkins’ WPA used fewer raw materials and semi-finished goods than did the jobs of the PWA.

As reported, the three infrastructure-public works programs employed 3.1 million workers per year. This created 3.1 million jobs in the private economy, so there is a total of 6.2 million jobs. These 6.2 million workers spent their income on purchasing food, clothing, and homes, and this created accompanying production and 0.9 million more jobs in those other sectors. As a result of infrastructure-public works, a total of approximately 7.1 million jobs were created, conservatively estimated. This represented about one-ninth of the United States’s workforce of the time. Roosevelt had made a major attack on the Depression unemployment, created jobs that made a productive contribution to the economy, and en-

abled workers to both sustain and uplift their families. This was quite a dividend to the economy (which could be repeated today). This put the U.S. economy on a new trajectory, which will be discussed at the conclusion of the section on the New Deal.

4. A President for Social Justice

President Franklin Roosevelt carried out a revolution for social justice. Basing himself on the General Welfare clause of the U.S. Constitution, he took personal responsibility for the development of the full powers of every citizen.

A foremost feature of this process, was the development of a social security system. No citizen should be permitted to starve or perish from want, and a sound instrument for retirement was to be provided for. In a June 8, 1934 message to Congress, Roosevelt spoke of a “national social insurance system,” to protect against “misfortunes which cannot be wholly eliminated in this man-made world of ours.”

During the 1930s, the antecedents of today’s neo-Conservatives, the fascist crowd of Morgan, Mellon, and du Pont, voiced many objections to the legislation to create a Social Security System, objections that are the same as those used 70 years later to try to tear the system down. As early as 1924, the banker-run Pennsylvania Chamber of Commerce railed that compulsory public schemes to aid the elderly were “un-American and socialistic, and unmistakably earmarked as an entering wedge of communist propaganda.” The watchword then, as today, was that if a retired or unemployed worker didn’t have enough personal savings, and could not live with his family, he should simply live off private charity. But the inadequacy of the charity system, which was clearly insufficient during the specious prosperity of the 1920s, showed itself during the Depression years of 1929-33. During that period, real personal savings fell by \$34 billion. The question of living from savings was moot: They had been wiped out.

Likewise, what public assistance for the elderly did exist, was criminally inadequate. Between 1930 and 1934 alone, the yearly cost of old-age assistance, administered by the states, rose from \$2 million to \$32 million, nearly twenty-fold in real terms, and the official number of recipients increased from 11,000 to 235,000. The number of people who really needed help, and didn’t get it, totaled several millions.

Despite the hysterics of Newt Gingrich’s political forebears, in August of 1935, the House of Representatives passed the Social Security Act by a vote of 372-33; the Senate by 77-6. On Aug. 14, 1935, President Roosevelt signed the Act into law. The Social Security Act not only provided for social insurance for retirement, but also provided for assistance to the indigent elderly, the blind, and families with dependent children; and established the first comprehensive national unemployment insurance system. Taking this Act’s major provisions:

- Old-Age Insurance—a giant national retirement sys-



Roosevelt is remembered for his commitment to the General Welfare principle, his intention to set in motion a “revolution for social justice.” The Franklin Delano Roosevelt Memorial in Washington, D.C.

tem based on social insurance principles, and intended to be the chief method of assuring income to an individual after retirement. The basis of the system is a Federal payroll tax, assessed on most employees and their employers. Today, the tax is 6.2% each for employers and employees. An individual becomes eligible for a monthly cash payment at 65, if he has worked a specified amount of time in employment subject to the payroll tax and has thus, along with his employer, contributed toward the costs of his own pension. Eligibility is a matter of right and does not depend on need.

- Old-Age Assistance to the Indigent—authorized Federal matching grants to the states to help them make monthly cash payments to indigent elderly people.
- Aid to the Blind—authorized Federal matching grants to the states to help them make monthly cash payments to those who are blind.
- Aid to Dependent Children—Federal grants to the states to help them support needy children and a parent, if the children have been deprived of normal parental support because of the death, incapacity, or absence from the home of a parent. Called Aid to Families with Dependent Children, the program incorporated the premise that society should leave no one destitute.
- Unemployment Insurance—a system established by the Act, whereby the states set up their own unemployment insurance programs, but by means of a tax offset device, are compensated by the Federal government. For the first time in American history, laid-off workers could collect unemployment insurance.

The Social Security Act was a revolution in social policy. Different nations in Europe had differing elements of this package, but America had had none. Now, it had all of them in one package.

The Fight for Labor Power and Civil Rights

At the same time, Roosevelt created the conditions to give labor the right to organize, thus increasing wages and living standards. One of the positive sections of the National Industrial Recovery Act (NIRA) of 1933, its Section 7(a), guaranteed the right to collective bargaining and stipulated that minimum wages and maximum hours of work should be set. The question was raised, whether industry would abide by the Act, and how enforceable it was. But labor leaders utilized it: John L. Lewis of the United Mineworkers had posters proclaiming, “President Roosevelt Wants You to Join the Union.” Organizing grew in mines, textiles, garment industries, along with the embryonic rubber, steel, and auto unions.

The National Recovery Administration, created by the NIRA, had a mediation machinery for collective bargaining, the National Labor Board, which Roosevelt appointed Sen. Robert Wagner (D-N.Y.) to head. The U.S. Supreme Court declared the NRA unconstitutional in 1935.

In February 1935, Senator Wagner introduced his Act to set up a National Labor Relations Board as a permanent independent agency, empowered not only to conduct elections to determine the appropriate bargaining units and agents, but to restrain business from committing “unfair labor practices” such as discharging workers for union membership, or fostering employer-dominated company unions. This Wagner Act set the basis for collective bargaining, and beginning to eliminate below-subsistence wages. This was essential to increase labor power, which would otherwise have been ground down.

In 1933, in the South, lynch mobs hanged black citizens and burned houses and churches, and there existed a strict segregation of facilities for blacks and whites, from water fountains to schools; in the North, rampant discrimination



Sen. Robert Wagner, an active force in the "American System caucus" which fought a crucial, though losing struggle for economic reconstruction legislation throughout the 1920s and until Roosevelt's election. Wagner sponsored much New Deal legislation.

and racism ran throughout society. Roosevelt made important changes on the front of civil rights, but there were others he did not make. Roosevelt fought on what issues he thought he could, but faced a powerful racist faction of the Democratic Party in the South, whose outlook had been reinforced by President Woodrow Wilson's support for the Ku Klux Klan, in the period of 1913-21.

In 1934, two leading figures in the American System Caucus, Senator Wagner and Sen. Edward Costigan (D-Colo.) introduced Federal anti-lynching legislation that had been drafted by the NAACP. President Roosevelt supported the legislation, and denounced lynching in portions of his speeches. A filibuster by Southern Democrats prevented a vote on the legislation.

Roosevelt attacked the problem largely by creating jobs, and setting up provisions for racial equality within some Federal organizations. For example, the Agricultural Adjustment Administration had provisions by which farmers voted on policies, such as crop referenda, and thousands of black Southern farmers, who were members of the AAA, voted for the first time in their lives. Roosevelt created jobs by which many blacks and minorities were rehired, and numerous more got jobs. In both Harold Ickes' Public Works Administration and Harry Hopkins' Works Progress Administration, provisions required that all workers get equal pay in each region.

These drew fanatical attacks. In March 1934, a retired DuPont Corporation official railed in a letter to John J. Raskob, the former chairman of General Motors, former chairman of the Democratic National Committee, and an officer of the du Pont-Morgan-Mellon-run American Liberty League that sought a fascist overthrow of Roosevelt: "Five Negroes on my place in South Carolina refused work this Spring saying that they had easy jobs with the government. . . A cook on my houseboat at Fort Meyers quit because the government was paying him a dollar an hour as a painter."

In June 1941, Roosevelt issued an executive order which forbade discrimination on the basis of race, creed, color, or national origins in the employment of workers in government or defense industries. As a result, the percentage of black workers in defense industry employment rose from 3% in 1942 to more than 8% in 1944. This created a basis for black workers to enter the productive labor force, particularly manufacturing in large cities, and created the environment within which, during the next two decades, to tackle the entrenched racism.

In 1932, black Americans had voted Republican, in homage to the legacy of Abraham Lincoln; in Chicago, in the Presidential election, 71% of black voters voted for Herbert Hoover. This changed substantially and blacks, along with labor and farmers—also Lincoln Republicans—now formed a minority-labor-farmer-ethnic alliance, as the basis of the Democratic Party.

5. Protectionist Regulation

The principle that guided the Roosevelt Administration's protectionist-regulatory legislation, and the instruments it set up, was that of national sovereignty. The London-Wall Street supranational oligarchy's speculation and looting of the economy had to be stopped; a nation has the right and obligation to exercise control over its financial and economic affairs, shaping them to provide for the general welfare of current and future generations. Roosevelt could never develop the economy productively while Wall Street had the power to extort through debt, and loot through speculation.

These laws were not comprehensive, and varied in their effectiveness even in addressing individual problems; yet taken all together, they moved the nation in the direction of asserting national sovereignty.

Protection From Wall Street's Bubbles

Most illustrative, was the effect of the banking legislation officially titled The Banking Act of 1933, but popularly known by the names of its two sponsors, Sen. Carter Glass (D-Va.), a senior member of the Senate Banking Committee, and Rep. Henry Steagall (D-Ala.), the chairman of the House Banking Committee. This legislation was crucial to the nation's sovereign ability to protect its citizens from the disasters of huge financial "bubbles." Glass-Steagall targeted a crucial aspect of banking, and was indeed a very sore point with the bankers, as attested to by the fact that Wall Street has spent billions of dollars, and 65 years, working to undo it. The story of the explosive 1933 Senate "J.P. Morgan" hearings, which blew the lid off the banking corruption behind the wild speculation of Coolidge and Morgan's "Roaring Twenties," is told in **Appendix A**. Franklin Roosevelt consciously used the political dynamite of these hearings to make possible the passage of Glass-Steagall despite fierce Wall Street opposition. The legislation passed both the House of Representatives and the Senate by overwhelming margins, and President Roo-

sevelt signed it on June 16, 1933.

Glass-Steagall split commercial banking from brokerage/investment banking. Any financial institution engaging in both activities, either had to split into two, or forgo one or the other activity. No commercial bank was allowed to own an investment bank, and vice versa. Sections 16 and 21 of the Act stated that no commercial bank could engage in the business of “issuing, underwriting, selling, or distributing, at wholesale or retail, or through syndicate participation, stock, bonds, debentures, notes or other securities.” (The exception is that commercial banks could sell and underwrite U.S. government bonds.) No commercial bank could underwrite, deal with, trade, or own for its own account, securities—since that was the domain of the investment banks. Conversely, no investment bank could take individual small customer deposits, which was the domain of the commercial banks.

To counter some of the other practices of the 1920s, the bill also forbade any bank officer from borrowing from his own institution.

This enforced separation of banking activities may at first seem arcane; but it actually addresses two very important matters. First, if a single institution is allowed to carry out commercial banking and investment banking (and insurance) under one roof, a very great amount of power is concentrated in that institution’s hands. Today, if the repeal of Glass-Steagall were combined with the repeal of the McFadden Act—which forbids interstate banking—the United States could rapidly consolidate to only 15 to 20 super-institutions, controlling every aspect of America’s financial life. Such a process was advancing rapidly in the 1920s, and Glass-Steagall helped to halt it.

Second, by placing different pools of money in a single institution—pools from commercial banking, from investment banking, from insurance—one is creating the temptation that that institution will commingle the funds, and use them for whatever purposes it pleases. This violates a basic tenet of banking. A commercial bank is, by definition, simply a *deposit-taking institution*. An individual who puts his money into a savings or checking account in a commercial bank, expects some interest, but is putting the funds there *for safe-keeping*, not for *investment*, which is the purpose of an investment bank/brokerage house. The individual does not want the funds commingled with other funds without permission.

During the 1920s, precisely these principles were grossly abused; banks were building up enormous power, and they were using funds as they saw fit. It was this abuse, as Franklin Roosevelt and other patriots saw, that had contributed mightily to the 1929-32 stock market crash, the breakdown of the banking system, and the physical-economic depression which had left millions destitute.

The bill carried another useful provision. It created the Federal Deposit Insurance Corp. (FDIC), which gave Federal insurance for citizens’ bank deposits up to a certain amount,



Giuseppe Zangara’s February 1933 attempt to assassinate President-elect Roosevelt in Miami, was one act in a decade-long battle by London- and Wall Street-centered backers of fascism, to get rid of FDR, including an effort at a military coup, exposed a year later, and constant assaults on the New Deal.

for the first time in the nation’s history. The FDIC announced that starting July 1, 1934, all deposits under \$10,000 would be insured 100%; deposits in the range of \$10,000 to \$50,000 would be insured 75%; and deposits of \$50,000 or larger would be insured 50% (today, all deposits up to \$100,000 are insured 100%).

When the Glass-Steagall Act became law, the bankers understood that an important part of the cycle of the 1920s was being broken. W.C. Potter of the Morgan Bank-controlled Guaranty Trust characterized the proposal as “quite the most disastrous” he had “ever heard.” The American Bankers Association led the fight against the bill, “to the last ditch,” in its president’s words.

Today, the bankers argue against the Glass-Steagall regulations with the lie that they are “outmoded.” Ironically, the exact opposite is true: Such regulation is needed now more than ever. While, up to now, the banks have not been able to unrestrictedly commingle commercial banking, investment banking, and insurance, they have nonetheless built up practices that are as deadly as anything that existed during the 1920s.

Other protectionist regulation by Roosevelt’s administra-

tion took aim at the hemorrhaging of citizens' and firms' wealth through securities bubbles and swindles. The Truth-in-Securities Act became law on May 27, 1933. This required full disclosure in the issue of new securities to the public. Heavy penalties would be levied for failure to give full and accurate information to the government about securities. The Securities Exchange Act of the following year—June 6, 1934—set up the Securities and Exchange Commission (SEC) to regulate and oversee the securities markets. Certain manipulative practices (such as washed sales and matched orders) were prohibited. Insider trading was eliminated.

The Public Utility Holding Company Act (PUHCA) of Aug. 26, 1935, regulated the electric utility industry, to halt the speculation in and pillaging of electric power by financier-controlled “power trusts.” In combination with the Federal Power Act of 1935, this set up the system of cost-of-production pricing of electricity, which functioned well for 60 years until it came under attack, with well-known disastrous effects, from the deregulators in the late 1990s.

The Roosevelt administration also pushed through the Communications Act of 1934, which created the Federal Communications Commission to regulate the radio, telegraph, and cable businesses; the Civil Aviation Act of 1935, which created the Civil Aeronautics Board which regulated the airline industry and fostered its development; the Railway Retirement Act, which set up pensions for railway workers; legislation which established minimum wages and virtually abolished sweat shops; and others.

6. A Trajectory of Recovery

We can assess the contributions of the New Deal as a whole.

Roosevelt's public works-infrastructure projects, along with the other industrial and agricultural work of his administration, powered the physical economy on a trajectory of recovery. Between 1933 and 1937, the production of food and kindred produce rose from a value of \$7.96 billion to \$13.08 billion; the production of clothing rose from \$2.18 billion to \$3.26 billion; the production of motor vehicles rose from \$725 million to \$2.21 billion; and the production of the capital goods sector of industrial machinery, rose from \$577 million to \$1.88 billion, a tripling. Adjusting for the sharp deflation, many areas of industrial production had surpassed their 1929 levels, some were below. But the *New York Times* industrial production index for the total economy, expressed on the basis that 1929 = 100, had reached 110 by Spring 1937.

Roosevelt had reduced unemployment from 12.83 million at the start of 1933 to 7.70 million in 1937. (It should be noted that, at least according to one account by Labor Secretary Frances Perkins, those workers working on public works programs were not officially counted by the Department of Labor as employed, but as unemployed. If that is true, at least with

respect to this issue, the reported official unemployment levels were too high, as there were millions working on public works.)

Roosevelt had also significantly restored the *quality* of labor power, built a matrix of technology-transmitting infrastructure, and stabilized the banking system.

But this picture must be tempered: *FDR's work had not licked the Depression, but it had put the physical economy on a trajectory of recovery.* The level of unemployed of 7.70 million (or whatever its exact level, when corrected for the workers on public works) remained too high. The increases in industrial production had only partially touched some sectors of the economy. There was not the interaction of the different sectors of the economy which is needed to give an economy depth. The economy had advanced significantly from the worst features of the Depression, and had generated positive features of permanent benefit, but there was much more to do.

The Assault on Public Works

At times, Wall Street could work through elements of Roosevelt's own administration to cripple public works. One such element was the equivocal Treasury Secretary, Henry Morgenthau. At times, Morgenthau supported Roosevelt strongly; at other times, he leaned to his Wall Street patrician upbringing. Starting in 1936, Morgenthau joined Wall Street in a campaign to get Roosevelt to slash public works, claiming the economy no longer needed it, and that Roosevelt should concentrate on “balancing the budget” for the 1938 election campaign. Morgenthau asserted that although “the patient might scream a bit when he was taken off narcotics,” the time had come “to strip off the bandages, throw away the crutches,” and let the economy see if “it could stand on its own two feet.” He pointed to the *New York Times* industrial production index reaching 110 by Spring 1937.

Morgenthau succeeded in June 1937, in pressuring Roosevelt to cut nearly all funds to the Public Works Administration, with the result that between June and July 1937, almost all the PWA workers were fired. In lockstep, the Wall Street financiers, Roosevelt's fierce opponents, began pulling credit out of the economy, creating another credit crunch. This set off a self-feeding spiral of economic collapse beginning August 1937. By December, from its high of 110 in the Spring, the same *Times* index fell to 85, wiping out all the gains made since 1935. In three months, steel fell from 80% of capacity to 19% of capacity. Between Labor Day and the end of the year, 2 million people were thrown out of work. And the Dow Jones industrial average lost 39% of its value between August and October.

The value of public works to the physical economy had thus been demonstrated, by negative example.

The economy was set back, and had to wait for Roosevelt to undertake his next phase of activity: the 1939-44 economic mobilization for World War II.